



## PROCEEDINGS OF PUBLIC COMPANIES.

## CORNISH MINES.

The annual general meeting of shareholders was held with-closure, New Broad-street, on Thursday, the 1st instant, pursuant to notice.

GEOFFREY WILLIAM HARRISON, Esq., is the chair.

The meeting was well attended, and the proceedings excited more than ordinary interest. The following will be found to comprehend the principal points adverted to in the report, which sets out by stating that the accounts have been made up for the two years ending the December last, showing the receipts and expenditures over that space of time, whereupon it appears that there is a balance or net profit of £1,335. 1s. 9d.; ascertainig as a reason, for the accounts having been taken over that period, that they had not been previously printed. This profit would have been increased to the extent of full £1,000, had not an outlay been made in the erection of engines, and carrying on the workings in the Druid shaft, "from which very large returns are expected." The mine, moreover, presents highly favourable prospects from the near approach to the Hornbeam north adit, which is expected shortly to be cut; this adit running east and west through the length of the shaft, and which is now yielding large and profitable returns to the Tincoff adventurers. The committee referred notice particularly to the report of Capt. Joseph Lyle, which had been received. Since the preceding meeting, several of the committee had visited the mine, and had expressed themselves highly satisfied with the mode of working, and the prospects it presented. The committee expressed their intention of convening an early meeting of the adventurers, with the view of revising the rules and regulations of the company. The report further added, that the two retiring members of the committee were Messrs. William and Charles Chippendale, who were eligible for re-election, and that there were three candidates to fill the offices of the retiring members—viz., Messrs. F. Mawatt, F. Ricketts, and A. F. Harrison.

The amounts for the two years give the amount of costs raised—

Years.	Copper.	tin.	Total.
1842	£10,000	2 4	£10,000 2 7
1843	£10,000	2 0	£10,000 2 0

amounting together to £13,433. 6s. 3d., which differs slightly from the amounts received from the mine, but which arises from other charges and expenses, distinct from the London management. The following are the results, as we find on reference to the mine accounts—

Years.	Copper and tin.	Costs, including dues,	Profit.
1842	£10,000	2 4	£10,000 2 7
1843	£10,000	2 0	£10,000 2 0

Before entering upon the proceedings at the meeting, it may be well here to give an abstract of the amounts received from the mine, and which have been placed in our hands. It appears that, previous to the sale of ours, £10,000, was applied as capital for working the mines, which, with the costs paid, and costs for the relative partnerships, may be thus taken—

Years.	Capital	Costs, including dues,	Profit.
1842	£10,000	2 4	£10,000 2 7
1843	£10,000	2 0	£10,000 2 0
Total	£20,000	4 4	£20,000 4 7

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The following account of the operations of the mine during the past year will be read with interest by those who are adventurers; at the same time that it affords information to those who feel an interest in mining adventures. It appears that during the past year the ground driven on course of the holes was 1,330 fathoms; the depth of shafts and winze work, 300 fathoms; and the extent of cross-cut driven, 130 fathoms—making a total of 2,670 fathoms. The copper ore raised during that period was 49,196L 16s. 9d.; the tin, 7,842L 9s. 8d.—total, £58,041. 16s. 9d. The working expenses during the like period was £3,011. 16s. 9d., which, with dues £100, amounted to £4,041. 16s. 9d.—thus leaving a clear profit upon the working of the last twelve months ending Dec. 1843, of £11,000. 14s. 9d.; to this may be added the value to be attached to steam-engine, pit-work, &c., at Druid Mine, which, if taken at £1000, would make the surplus, or profit, £14,000. 16s. 9d. We have before us an estimate of the value of ours disseminated for the past twelve months, ending in February, which is assumed to be £2,3360. 9d.; while, during that period, the ore raised and sold amounted to £8,041. 16s. 9d.; the difference, a difference of £5,681. The aggregate of losses for twelve months, whose wages amounted to £1,14s. 9d. each man per month—making a total of £12,857. 16s. 9d. The aggregate of losses for the twelve months was £2,000, or 200 men on the average monthly; whose savings amounted to £1,14s. 9d. each man per month—a total of £11,000. 16s. 9d.—From the report of Captain Joseph Lyle, to which reference is made in that of the committee, it appears that there are fifty-eight pairs of working in the mine, the wages or profits from which are thereto reduced.

The report and accounts having been read, a long-headed discussion ensued as to the parties who should be associated with the rules, constituting the committee, in the course of which Mr. Sargent (the solicitor of the company), and representing the interest of a considerable body of the shareholders, Mr. Stannard, Mr. Vigne, Messrs. Chippendale, the Chairman, and others, took no active part—the question arising as to whether Messrs. Chippendale legally escaped their office by rotation—and in the course of which discussion the nature of the several "rules and regulations" came under notice, a difference of opinion prevailing among the adventurers on account.—The question being assumed consented of a general nature, Mr. W. H. Vigne was cast for the purpose of addressing the meeting, and to state how far he was interested in the question of rules, and also the part he had taken in the management of the affairs of the company. He stated that, only in the year 1843, he was with others appointed on a committee of investigation into the affairs of the company; that they had, in the course of the inquiry, met no less than forty-eight times, and the result was, from the inspection of the records, that the sum of nearly £1,000, was owing by the mine. This sum, however, was in a great measure, concealed by slaves being disposed of, and other arrangements made. This being reflected, it was considered desirable by Mr. Michael Williams (as one of the committee) that a report should be made upon the mine, and accordingly Capt. J. R. Williams was instructed on his behalf to inspect the mine. This report was had by Capt. H. (Capt. H. being a member of the committee), and the report and accounts being ordered to be printed and circulated, and thanks having been given to the chairman, the meeting adjourned.

We have given the report of the meeting at greater length than usual, as several points of interest are involved, and more particularly as the mine having been constituted a private adventure, some observations have been made "out of doors," which, in the absence of correct data, might be calculated to affect it in the opinion of the mining interest and capitalist.

There was paid the other day (January, 1844), and it was now said that £10,000 was in hand, but which he stated, there not being more than £10,000 in assets, although there might be other properties further reducing the sum, undeniably, a mutual unanimity at the head of management in London. He moreover expressed his opinion that the underground management of the mine could not be more perfect or economical—but at the surface, it was decidedly bad and extravagant; there were three clerks, paper, and other agents—while the management in London, suspending from 1840 to 1843, a year, he considered ought to be cut down. He was most willing to retire from acting as a member of the committee, but felt it his duty to express his opinions to the proprietors, feeling assured that if new blood was not infused into the management in Cornwall, the adventurers would regret not having taken a decided course.

The CHAIRMAN wished to know to what deficiency Mr. Chippendale had referred, with reference to the return of ours and dividends paid, the accounts being open to the table, to which reference might be readily made, as the statements made by that gentleman were calculated to convey a misrepresentation—on which Mr. CHIPPENDALE observed, that he referred to the surplus of profit made since August, 1842; and the dividends paid of 7s. per share, still contending that £1,000 of such amount did not come from the funds of the company.—Mr. SARGENT (the solicitor of the company) referred at once to the report and accounts then lying on the table, as to whether the representations made by Mr. Chippendale were based on fact, or otherwise—whether the dividend paid was from profits on the mine, or not—because, the division of profit when no surplus had arisen, if such were the case, must reflect on those to whom the management was intrusted; and he believed, on reference to the amounts themselves, (Mr. Chippendale) would be found to have fallen into error.

Mr. L. Vigne, as one of the committee, considered it a duty imposed

upon him to make some remarks on the attack of Mr. Chippendale, whose object, he contended, was, to reduce the value of the mine in the estimation of the shareholders, so that the share might be got for nothing—although he did not wish to be considered as applying such observation to that gentleman, as to the object he might have in view. In December last, he (Mr. V.) went into Cornwall, and, with the assent of the committee, employed Capt. Trewask to report upon the mine. He was perfectly aware that Mr. Michael Williams and Mr. Joseph Lyle were opposed to each other; but his object was, to obtain a report on which dependence might be placed, without regard to party or conflicting interests. It was said, that Capt. Trewask's report dealt in possibilities, and did not apply to facts. Now, he had no hesitation, and that upon the authority of Capt. Trewask, of saying, that Captain Stephen Lean's report, referred to, was unworthy of notice—for he was either incapable, as a miner, in giving a report, or he had wilfully made a misrepresentation, with a preposterous object. It was notorious in the county that Captain Lean was a candidate, and looked for the office of superintending agent—for (said he) if only 200 tons ought to be raised in the present state of the mine, while 800 tons are sampled per month, and I can raise 1000 tons at an after period, by better management, the credit will be mine. The question with the board was not simply, as Mr. Chippendale had said, as regards salaries, but there were other grounds; it was not simply on the score of expense that the present parties should be removed, for he was as anxious as others for economy being observed; at the same time, it was due to the majority of shareholders to consider what course was best to be pursued—and, while acting as a member of that committee, observing the strictest economy, he was not disposed to fall into that error which might be designated "false economy." Looking to the amounts, with reference to the charge made by Mr. Chippendale, that the £1,000 divided declared in June, 1843, had come from other sources than that of the mine, he would read the amount then laid upon the table. From this it appeared, that the amount received in the two years ending December, 1843, was £17,035. 16s. 9d., including a balance of 30,072. 2s. 6d.; while, after deducting the cost, with dues, and other expenses, a balance appeared of £4,223. 16s. 9d., from which a dividend of 17s. per cent. had been paid, leaving a surplus of 7,875. 16s. 9d. at the present time—after payment of the several dividends, £3,000, more than in January, 1842. For himself, and, he might add, for other members of the committee, to avoid all questions pertaining to the rules, and that the adventurers should have the full opportunity of nominating a committee to represent them, he was perfectly willing to retire.

Mr. W. H. Vigne spoke to the question before the meeting, trusting that the objects of the adventurers should not be lost sight of, and that they should at once proceed to business, and confine themselves to the terms of the notice by which they were convened.—It was moved by Mr. L. Vigne, and seconded by Mr. Stannard, that, from the questions which had arisen as to the parties who should retire from the committee, the rules and regulations should be suspended for the day, a general having been established on a previous occasion.—On this subject much discussion arose, and difference of opinion prevailed, as to the legality of such a course.

Mr. CHAPMAN again expressed his readiness to retire, and that the other object being to state his opinion as regards the miners, and that no objection lay attached to him, the resolution above referred to was withdrawn.—An amendment was then moved, that Mr. George Dakin's and Mr. Barber's (lately deceased) names should be substituted as retiring members.—On the question being put, the numbers were—20 for the amendment, 20 against. The original motion was then carried, those being 100 in favour, 70 against; and the report and accounts being ordered to be printed and circulated, and thanks having been given to the chairman, the meeting adjourned.

We have given the report of the meeting at greater length than usual, as several points of interest are involved, and more particularly as the mine having been constituted a private adventure, some observations have been made "out of doors," which, in the absence of correct data, might be calculated to affect it in the opinion of the mining interest and capitalist.

## ECONOMIC LIFE ASSURANCE SOCIETY.

The ordinary annual meet of the shareholders of this society, and an extraordinary unprovided general meet was held at Bailey's Hotel, Blackfriars, on Friday, the 1st instant, and was numerously attended.—The slate having been taken by JOSEPH BAXENDALE, Esq., Mr. WHITHEAD (the secretary) read the notice convening the meeting.—The CHAIRMAN then proposed a resolution for raising a sum of £10,000, to pay off the loan note due to the company, and for other purposes (the particulars of which are in the advertisement), which was followed by a short discussion.—Mr. LEWIS asked if the shares were to be scrip or registered shares.—The CHAIRMAN said they were to be registered after the first call is paid, or they would not be entitled to a dividend.—A shareholder wished to know if any advantage would accrue in the payment all off ours, per share.—The CHAIRMAN replied no, as the money was only required for a specific purpose—viz., to discharge the debts of the company, they were not desirous of having more than they were wanted at one time.—In reply to Mr. LEWIS, the CHAIRMAN said, £10,000, would be wanted to discharge the loan note, and the £10,000, no meeting would be at the disposal of the directors for any parliamentary purposes, but not for any old compensation.—Mr. CAWTHRON (a director) made a similar statement to the meeting.—The resolution was then passed unanimously.—The BANCORP read the draft of the bill for making a branch for the new Ashford to the towns of Canterbury, Margate, and Ramsgate.—The CHAIRMAN said at least £10,000, or £10,000 per annum might be obtained to be brought to the main line by this branch, and that a good sum was expected from the Hastings branch.—On the motion of the CHAIRMAN and H. F. BRANSTON, Esq. (the deputy chairman of the board), returned thanks on behalf of the directors.—The meeting then separated.

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As one-fourth of the surplus was fully sufficient to pay the 30,000 to the shareholders, according to the provisions of the Deed of Settlement, the largest paid off. Although the directors did not allow three months for that purpose, yet they were willing to commence the redemption of the shares immediately, paying 6s. per cent. on interest thereon at a rate of 4s. per cent. per annum, up to the date of surrender. Interest was to cease on and after the 1st of July next on such shares as should not be surrendered. After deducting £10,000, for the shareholders from the gross surplus, the sum of £4,000, would remain as the portion of the participating shareholders, shares were held by the company, the balance pertaining to them fell into the assurance fund, and remained unclaimed by them, thereby reducing the surplus of the assurance fund £4,000.

In dealing with the insurance fund, the directors considered that it would not be prudent to appropriate the entire surplus now in hand; for, although the reserved value of the policies was adequate to the existing liabilities, they thought it desirable to have a precautionary surplus, in order that the character and credit which had produced the present prosperity—should not be impaired. They, therefore, proposed to retain one-third of the surplus. Two-thirds of the surplus of £7,000, viz., £4,700, would, at the average of the participating members (forty seven), secure reversionary bonuses to the amount of £100,000, or £10 per cent. on the premiums on which it is computed—that is, on the premiums from those who participated in the last division, and from those who have since joined the company. The remaining third of the surplus, £2,300, would accumulate as interest for the sole benefit of the assured. All the next period of division, and to prevent any loss upon such policies as might become claims in the interim, the directors proposed a prospective contingent bonus of 12 per cent. per annum on all business policies on which claims should accrue before the next division of profits, when a re-adjustment would be made. The contingencies and absolute bonuses, taken together, were equivalent in value to an absolute bonus of 20 per cent. on the amount of premiums with which it was compared. In addition to the three options given at the last division—that is, of applying the bonus to increase the sum assured, or to reduce the premiums either for the whole of life, or for five years only—the directors now offer a fourth, in the form of a ready money bonus. By paying off the shareholders, the constitution of the society would undergo an important change, and the Economic would become a mutual assurance society, under circumstances highly favourable to the assured; for, independently of other advantages, the whole of the profits would henceforward be divided amongst those assured, on the equal scale of premiums. As a mutual assurance society, the Economic will present advantages surpassed by no other; the premiums charged being lower than those of any office which divided profits with the assured, and much lower than those of any mutual assurance society. The mode of applying bonuses was strictly equitable, and was adopted in every variety of circumstances. The number of policies had increased during the last five years from 4000 to 6000; the income from premiums had increased from 70,000 to 90,000. The average annual receipts for premiums for the five years amounted to £1,250; the claims to £7,000; and the bonuses added to such claims £400. The large number of assurances, now existing, afforded a security against such deviations as might result from a paucity of numbers. In conclusion, the directors recommended the society as one which was as much entitled to public confidence for the equity of its principles, as it was to preference for the economy of its management and the liberality of its practice.

The CHAIRMAN said the remarkable clearness and accuracy of the report, rendered it unnecessary for him to make any addition to its statements. He could not, however, refrain from congratulating them on the state of their affairs. It was certainly remarkable, that a society started on the principle of low premiums rather than large bonuses, should, in the twentieth year of its existence, have attained such prosperity, as to be able to dismember itself of the weight arising from having shareholders, and to give a handsome bonus to the parties whose interests were concerned. The directors were determined to continue to watch over the interests of the society. Through them might be societies which had larger connections, if any one would show him an office which was conducted on more benevolent principles, he would not decline any longer to occupy the chair.—In reply to a question from a shareholder, the CHAIRMAN said, that every shareholder would receive double the amount which he had invested, with interest of 4s. per cent., up to the 1st of July, and if any person wished to receive the money immediately, he might obtain it with interest, calculated up to the day of payment.—Mr. SNEYDER suggested the propriety of presenting a gratuity in the treasury, as an acknowledgement of the deep-voiced which they entertained of the value and importance of his services; but, at the request of the chairman, the matter was left in the hands of the directors, who, it was stated, had already taken the subject into their consideration.—Mr. G. BARKLEY proposed a vote of thanks to the directors for the zeal and ability which they had displayed in managing the affairs of the institution.—The motion having been seconded, the CHAIRMAN and H. F. BRANSTON, Esq. (the deputy chairman of the board), returned thanks on behalf of the directors.—The meeting then separated.

SOUTH-EASTERN RAILWAY.

A special meeting of this company was held at the London terminus, on Tuesday, the 10th instant, and was numerously attended.—The slate having been taken by JOSEPH BAXENDALE, Esq., Mr. WHITHEAD (the secretary) read the notice convening the meeting.—The CHAIRMAN then proposed a resolution for raising a sum of £10,000, to pay off the loan note due to the company, and for other purposes (the particulars of which are in the advertisement), which was followed by a short discussion.—Mr. LEWIS asked if the shares were to be scrip or registered shares.—The CHAIRMAN said they were to be registered after the first call is paid, or they would not be entitled to a dividend.—A shareholder wished to know if any advantage would accrue in the payment all off ours, per share.—The CHAIRMAN replied no, as the money was only required for a specific purpose—viz., to discharge the debts of the company, they were not desirous of having more than they were wanted at one time.—In reply to Mr. LEWIS, the CHAIRMAN said, £10,000, would be wanted to discharge the loan note, and the £10,000, no meeting would be at the disposal of the directors for any parliamentary purposes, but not for any old compensation.—Mr. CAWTHRON (a director) made a similar statement to the meeting.—The resolution was then passed unanimously.—The BANCORP read the draft of the bill for improving the branch line, which was proposed by the CHAIRMAN, and seconded by General Housman, and agreed to unanimously.—A shareholder asked there was any truth in the report that the chairman meant to resign.—The CHAIRMAN replied that, as long as he had health to fill his office, he should not resign. Having got through so many difficulties with them, it was difficult to say that he would resign, except they had more than enough difficulty discharging the duties.—The BANCORP was very happy to hear it so explained.—After some other remarks, the meeting adjourned.

CHURCH RAILWAY.—The half yearly meeting of the shareholders in the company was held at Bedford, on Thursday, when the total receipts from traffic were declared to be £10,000; net profit for the half-year, £100. Of this the directors declared a dividend of £10. per share, which will bear interest of 10 per cent., to be added to the reserve fund.

—GLENWYNN.—See also GLENWYNN COMPANY.—The annual meeting of the members of this company was held at Bristol, on the 10th inst., when the slate was taken by Henry Shad, Esq. A lengthened report of the director, read by Captain Clinton (the managing director), which stated that £1000 was paid by the Great Western for 1843, increased to £10,000, on £10,000, or the equivalent to £10,0

# RAILWAY AND COMMERCIAL GAZETTE

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## CALDONIAN RAILWAY, FROM CALDER TO EDINBURGH AND GLASGOW.

Being the Bill recommended by the Government Commissioners.

Capital of £1,000,000, in shares of £10 each.

PROVISIONAL COMMITTEE.

The Right Hon. Lord BELHAVEN, Chairman.

Lord-Colonel GRAHAM, of Montrose, Deputy-Chairman.

The Most Noble the Marquis of Queensberry.

The Right Hon. the Earl of Cawdor.

S.C.B., K.E.W.

The Right Hon. Lord Abercromby.

Hon. Mr. Justice of Ayrshire, Bart.

Mr. William Cunningham ANDERTON, of

Comptonhill, Sheriff.

Mr. Frederick Pollock, M.P.

Rev. Admiral Sir Charles Malcolm.

Gen. John Elliot, of Cluny.

Gen. James Grant, of Hill, Captain.

The Lord Provost of Glasgow.

The Duke of Guild of Glasgow.

The Governor of the Trains' House,

Glasgow.

The Lord Provost of Perth.

The Provost of Ayrshire.

The Provost of Calton, Glasgow.

The Chairman of the Grand Junction

Railway Company, J. Moore, Esq.

The Chairman of the North Union Rail-

way Company, T. W. Rathbone, Esq.

The Chairman of the Lancaster and Pre-

terton Railway Company, G. Barlow, Esq.

The Chairman of the Manchester, Stock-

ton and Birkenhead Railway Company, James

Browne, Esq.

John Leader, Esq., Chairman.

The Provost of Dundee.

The Provost of Paisley.

Sir James Campbell.

J. Montague, Esq., of Shrewsbury.

John Henderson, Esq., of Park.

Thomas D. Douglass, Esq.

John Miller, Esq., of Monklands.

John Wilson, Esq., of Dunbarton.

John Flavel, Esq., of Clarendon.

Alexander Scott, Esq., of Edinburgh.

James Ewing, Esq., of Levenhulme.

H. Houldsworth, Esq., of Chorlton-

wood.

William Dixon, Esq., of Govan.

David Dickson, Esq., of Hartree.

Colonel Macmillan, of Powis Hall.

Robert Mackenzie, Esq., of Dalzielton.

Robert Monteith, Esq., of Carlisle.

William Purdie, Esq., of Melville.

Thomas Chalmers, Esq., of Eastgate.

Robert Stewart, Esq., of Carlton.

A. Campbell, Esq., of Wemyss.

James Ewing, Esq., of Levenhulme.

H. Houldsworth, Esq., of Chorlton-

wood.

William Dixon, Esq., of Govan.

John Thompson, Esq., of St. Rollox.

Ainslie, Dickson, Esq., of Govan.

Robert Findlay, Esq., of Easterhill.

Robert Bartholomew, Esq., of Glasgow.

William Cross, Esq., ditto.

Laurence Robertson, Esq., ditto.

Henry Brock, Esq., ditto.

John Whitehead, Esq., ditto.

Alexander Martin, Esq., ditto.

Joseph Locke, Esq., F.R.S., J. E. Irvington, Esq., Member of the Inst. C.E.

Secretary—Lord Clinton Harewood, Associate of the Inst. C.E.

PARLIAMENTARY AGENTS—Messrs. Archibald Graham, Matthew, and Weston.

AGENTS IN EDINBURGH—Messrs. Hope and Oliphant, W. S.

AGENTS IN GLASGOW—Messrs. Mitchell, Henderson, and Mitchell.

PAPER.—

Messrs. Marthman and Co.

Moore and Co.

Wakeling, Crewther, and Co.

Head and Co.

The Lancashire Banking Company.

The Commercial Bank.

The Royal Bank.

The Commercial Bank.

The Western Bank of Hamilton and Airdrie.

A Bill for the construction of a railway from Lancaster to Carlisle, being the first section of the national line to Scotland, as recommended by the Government Commissioners, having now passed the committee of the House of Commons, the parties who have long had before them the project of the completion of that route, are in a position to submit it to the public.

Of the proposed capital of £1,000,000, one-third, or £300,000, is already taken by the railway companies interested in the success of the undertaking, and by land-

owners in the districts through which the line will pass.

The northern terminus, for the present, being Edinburgh and Glasgow, it is proposed subject to such modifications as may be found needful, to connect the Lan-

caster line from Carlisle, and following the course recommended by the Govern-

ment Commissioners, along the valleys of the Aire and the Clyde, by Lockley,

Waddington, and Lancaster, to diverge at a point about seventy miles from Carlisle, to Kilmarnock on the west, and (partly by means of existing lines of railway) to Glas-

gow on the west.

So long ago as 1820, Mr. Locke's attention was given, in this line, and surveys were made under his immediate direction, since which time he has frequently exam-

ined it; and he now assures the committee, that their object can, beyond doubt,

be attained, at a number of miles of new railway, now to be made, being only about

120, at an outlay not exceeding £1,000,000.

With regard to the advantages of this route as compared with any other, the com-

mittee need only select the following extracts from the report of the Government Commissioners—viz., “so far as regards the interest of the traveller, both in re-

spect to the swiftness of his time and of his gait, the preferable route for the rail-

way communication to Edinburgh and Glasgow would be the proposed Carlisle

and Lancaster line,” &c. and, it is evident, any party should be ready to undertake

the execution of this proposed Cumbrian Railway, they would certainly be entitled

to every facility the Government could afford, provided security were given for a sum to cover the cost of insuring the whole line from Lancaster.”

Upon the subject of traffic it may be observed, first, that this railway will add

the shortest and cheapest transit from Glasgow and the west of Scotland to all

parts of England, especially, by means of the projected Porth and Morecambe Rail-

way, it will connect those cities and the north of Lancashire generally with England;

and thirdly, it will bring Edinburgh into direct communication with London, Lancashire, and all the manufacturing districts with which that city has at present no communication except by road, and the trade of which is necessarily carried round by a circuitous route, by sea, and by canal or railway which have an immediate

connection with it.

The proposed line of comparative distances seems to the committee to prove

beyond doubt, and only that their line record fail to secure the approbation of the

legislature, but that, when made, it would also necessarily receive nearly all the

trade and traffic of Scotland. In its intermediate route, the line involves the rich

mineral and manufacturing districts of Lancashire and Cheshire; the great

gold-field, iron-works, and coal-fields of the country are well known; of these there are,

at the present moment, large quantities daily carried for a distance of forty miles

in both directions, and thousands of tons of iron and coal are daily carried northwards

for the distance of twenty-five miles to the Harbour at Liverpool.

Now can the carriage of these, with southwards, for one of the most important regions of Scotland, fail to produce a considerable amount of traffic.

In the next instance, it is evident, that this railway will add

the shortest and easiest transit from the north of England to Scotland, and vice versa.

The committee, in their evidence before the House of Commons, have shown that

the results they give are as much as to lead us to expect any other to that by Carlisle

and Lancaster.” From a similar and most interesting investigation, the committee have

reached the same conclusion of a route of at least 6 per cent. per cent. on the investment.

The Government have also received statistical returns respecting the districts through

which the several competing roads would pass, and as they are of an interesting na-

ture, we have placed them in the Appendix to the report; but we do not feel that

the results they give are as much as to lead us to expect any other to that by Carlisle

and Lancaster.

As regards the expense of working this railway, it is obvious that a great ad-

vantage will arise from the fact that both the Edinburgh and Glasgow traffic will form

the same route for three-fourths of the whole distance.

The consideration has the double object of saving the cost of the line, and

increasing the revenue by securing a more rapid and more certain communication

between the two great cities of the kingdom.

The expenses will be of 60 per cent., and it will be a privilege of the Act of Incorpora-

tion to provide for the payment of 60 per cent. of the cost of the line.

The Preliminary expenses of 10 per cent., or 60 per cent. to be paid at the time of

incorporation, and expenses to be incurred in executing the agreement, shall be

paid by the Proprietors of the line.

Agreements have already been made in the form annexed, to Messrs. Foster and Weston, Esq., the solicitors, Liverpool, to Mr. John Long, Glasgow, to Messrs. John Wilson and Co., the solicitors, Edinburgh, to Mr. George Stevenson, Edinburgh, to Mr. W. G. Smith, solicitor, Manchester, and Mr. W. G. Smith, solicitor, Liverpool, to Mr. T. S. Locke, solicitor, Manchester, or to the proprietors respectively in London.

\* TABLE OF DISTANCES BETWEEN THE PLACES AFTER-MENTIONED  
BY THE PARLIAMENT BILL.—

EXTRACTS FROM THE PARLIAMENT BILL.

London—Birmingham

London—Bristol

London—Newcastle-on-Tyne

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London—Glasgow

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London—Prestwich

London—Southampton

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London—Plymouth

**MR. HENRY ENGLISH,** of No. 5, SHORTER'S COURT, THOROMPTON-STREET, CITY, having, at the instance of numerous friends, made the necessary arrangements for securing the business of AGENT in the PLATEAU and MINE-BROKERS, is induced to solicit the favor of the support of the subscribers to the Mining Journal, Mining and Commercial Gazette. The extended circle, arising from his immediate connection with that publication, may be fairly presumed to afford more than ordinary facilities and advantages in the transaction of business in mineral estates and mines abroad; in which may be added, an intimate acquaintance, for the past fifteen years, with the mines and collieries of Great Britain and Ireland, as well as some parts of the continent.

**TO BUY.**—Twenty Mansions, Two Carrington, Five Holborn, One Strand, Two Queen's, Twenty Legal, General Life Assurance Society.

**TO SELL.**—Two Condominiums, Fifteen Tenants, Two Trowers, One White Fins, Two Fins, Two Atlantic Consols, Twenty Santiago, Five Alteas Mines, Two Capitols, Two Wheal Providence, Two Mary Park, One Province.

**MINING OFFICES,** SO. THREADNEEDLE-STREET, LONDON.—WILLIAM TREACHER, Jun., MINING AGENT and SHARE-BROKER, from Redruth, Cornwall, begs most respectfully to inform his numerous friends for the kind and confidential manner in which he has been supported during the last two years of his agency, he begs to inform his friends and the public generally, that he has just returned from the several countries through the colonies of South and Central America, for the purpose of visiting and improving his mines.

**SHARPS BOYD and WILDF.**—operators of the company to whom, and information obtained by application.

**VALUABLE LEAD MINES IN BRECONSHIRE.—TO BE LET ON LEASE,** of the several royalties of the district, an extensive tract of NEW MINERAL GROUND, in the parish of Llanidloes, Montgomery, in the county of Brecon. The property is known by the name of MARY T. SHARPS, in the immediate neighborhood of the celebrated Mynydd Mawr, Tredegar, and Mynydd Mawr Lead Mines.

Borrowed sum of one hundred thousand pounds raised by singly trenching the ground in the form of a few feet only. By an assay, it produces 75 per cent. of lead in the ton of ore, with some silver, which, on test, has not been accurately determined, but it is believed to yield 40 dwt. to the ton of lead. A very considerable water-power may be had on the premises, and the ore may be converted in the smelting works in the same manner as it is converted from the Rhondda Mynydd and the adjacent works.

For terms and other particulars apply to Capt. Mathew Praetor, Llantwit Chorlton, Milford, Lampeter, Carmarthen, or to the proprietor, P. Vaughan, Esq., Brecon.

**THE PATENT SAFETY FUSE,** FOR BLASTING ROCKS IN MINES, QUARRIES, AND FOR SUBMARINE OPERATIONS.—This article affords the safest, cheapest, and most expeditious mode of effecting the very hazardous operations. From many testimonies to its superiority with which the manufacturers have been furnished from every part of the kingdom, they send the following notice, recently received from John Taylor, Esq., F.R.S., &c., &c.:

"I am very glad to hear that my recommendations have been of any service to you. They have been given from a thorough conviction of the great importance of the Safety Fuse, and I am quite willing that you should employ my name as evidence of this."

Manufactured and sold by the Patentees, RICKFORD, SMITH, and CO., Cheltenham, Cornwall.

**EUROPEAN LIFE INSURANCE AND ANNUITY COMPANY,** NO. 16, CHATHAM PLACE, BLACKFRIARS, LONDON.

Established, January, 1819.

President—Mr. JAMES RIVET CARMIC, Bart., Rock CHIE, Lymington.

Vice-President—GEORGE FORSTER, Esq., 2, Park-square, Regent's park.

Secretary—JOHN ELLIOT DREWITT BETHUNE, Esq., 30, Chester-square, Chairman.

Thomas Buxton, Esq., 1, Broad-street, Grosvenor-square.

John Street Curzon, Esq., 30, Grosvenor-square, Portland-place.

John Gurney, Esq., 1, Old Palace-yard.

Henry B. Haslewood, Esq., 1, Petty street, Soho-square.

Thomas Hunt, Esq., 1, Manchester-square.

William Payne, Esq., 10, Cadogan-place, Sloane-street.

Alexander H. Macmillan, Esq., 11, Parliament-street.

William Say, Esq., Treasury Chambers, Whitehall.

Frederick Scott, Esq., 10, James-street, Buckingham-gate.

John Stewart, Esq., 11, Portland-square.

George James Tatton, Esq., Wilton-park, Ansonbury, Wilts.

John Thorpe, Esq., 8, Foley-place.

FACULTIES are offered by this long established Society to suit the wants and tastes of every class of insurance. Premiums are received yearly, half yearly, or quarterly, or upon an increasing or decreasing scale.

The sums of the premiums appropriated to those who are insured for the whole term of life.

A liberal commutation is allowed to selectives and annuities.

DAVID POWELL, Secretary.

**GREAT BRITAIN MUTUAL LIFE ASSURANCE SOCIETY,** 16, WATERLOO-PLACE, LONDON.

THE CHIEF, Chairman.

WILLIAM MORLEY, Esq., Deputy Chairman.

John Brightman, Esq., John Egerton, Esq.,

Francis Thompson, Esq., James Weston, Esq.,

James W. Weston, Esq., Robert Lovell, Esq.,

Matthew Dawson, Esq., Robert P. Moore, Esq.,

Alfredus B. Scott, Esq., Robert P. Moore, Esq.,

Archibald C. B. Scott, Esq., George Thomas, Esq.,

Frederick C. B. Scott, Esq., T. C. Thompson, Esq.,

Walter Thompson, Esq., W. D. W. Thompson, Esq.,

Secretary—Walter Thompson, Esq., Treasurer—John Scott, Esq.,

Banker—Union Bank of London.

ADVANTAGES OF THIS INSTITUTION.

The whole of the profits derived annually among the holders of policies on such small premiums must have been paid.

Each policy has had the benefit of the best fire-police protection, for which no additional premium need have been paid.

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Each policy has had the benefit of the best fire-police protection, except with the exception of a portion of the amount, to be paid for the removal of the premium, according to the rate of interest, plus the cost of the premium.

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## ON THE PROPER SHAPE OF IRON RAILS.

About the year 1829, Mr. S. V. Merrick (of Philadelphia) communicated to the Franklin Institute a drawing and description of an iron rail for railroads, which was published in their journal. This rail was somewhat in the form of the letter  $\Delta$  inverted, and has been commonly called the bridge or trough rail. Some difficulties were apprehended at the time in manufacturing rails of this shape, and more in fastening them to the blocks of stone, than all the vague among engineers for supporting iron rails. But, above all, they had not been used in England—a sufficient reason with many then, as now, for rejecting them. In accordance with this view of the matter, rails of the  $T$  pattern were imported for the Columbia Railroad. These rails have a broad top, a narrow upright stem, and a small circular base. All practical men who saw them, predicted from the first that they would prove a failure, and so they have turned out; it has been found utterly impossible to keep them fast in the chairs, and the heavy engines running over the road have stripped off the unsupported part of the tops of many of them—indeed, what else could have been expected. The placing of such a rail to bear a great weight displays as much wisdom as attempting to make a man support a heavy burden, and, at the same time, compelling him to stand upon one leg. To obviate some of these difficulties and absurdities, the  $\Delta$  rail, similar to those on the Reading Railroad, was contrived and introduced; the base was made broader than the top, the top was made thicker than the old pattern, and further strengthened by thickening the brace or moulding between the top and upright stem. These were, no doubt, decided improvements, but they did not overcome, as nothing can, the inherent defects of this form of rail. And I predict, that when the rails of the Reading Railroad give way—as give way they inevitably will—it will first appear in the crumbling off and splitting of the inner unsupported edge of the rail. If any one will closely examine this road, he will find the greater portion of the weight of both the engine and the cars rest on about half an inch of the inner edge of the rail—the thinnest and most unsupported part of it. This form of rail, then, being contrary to true mechanical principles—the weakest part having to sustain the greatest weight, and having signals failed in practice on long trial—Why should we continue to use it, merely because it is the fashion, or out of respect for the authority of great names? Rather let us seek some improved form. This presents itself in the bridge or trough rail, a neglected American invention. As before observed, the rail is somewhat in the shape of the letter  $\Delta$  inverted; it is composed of a top, supported by two sides, spreading into flanges below—the interior part being hollow. Now, supposing we make the top 2 inches broad and  $\frac{1}{2}$  inch thick in the thinnest part, or over the interior hollow; the sides 1 inch thick and 3 inches deep, spreading to 2½ inches wide at bottom; the flanges 1 inch broad, and averaging  $\frac{1}{2}$  inch thick; the top of the interior hollow to be in the form of an arch. We shall then have a rail of more than double the width at the base as at the top, the strongest support will be directly under the greatest pressure, and the weakest part of it as strong as the strongest part of the unsupported table of the common  $\Delta$  rail. Such a rail will not weigh over 50 lbs. to the yard, and yet will evidently possess more than double the strength of the common form at 60 lbs. to the yard. These rails can be easily fastened on the sleepers or cross ties as the common form, the chairs at the ends will be much lighter, and screw bolts and nuts can be entirely dispensed with; they may also be turned round when one edge has worn away or failed from any cause. Thus possessing many advantages, I would respectfully call the attention of the directors and owners of railroads to the propriety of adopting them, seeing that they might thereby save one-fifth of their outlay for iron, and have a more serviceable article.—S. L. Lewis: *Miners' Journal* (U.S.).

## THE NEW PNEUMATIC ENGINE.

At the sale of the Marquis of Northampton last Saturday, Mr. Holmridge reproduced, in a more complete form, his metallic model for the air power, as intended to be applied to locomotive-carriages, whether for railway uses or for common roads. It appeared from that gentleman's statement that the scale and proportions of his model would not allow, without a monstrous appearance, the air balls, and especially the three trigger valves, such as need for air guns, to be shown in conjunction with the other parts. In the course of the numerous anxious investigations, it was understood that the carriage-engine, with all its adjuncts completely fitted, would be ready for the next sale, when another form for locomotion, using the Archimedean screw to work against the atmosphere, was promised for exhibition, and, if we mistake not, means are to be employed to prove by demonstration the combined power and economy of the moving agent (compressed air) which many persons could not sufficiently comprehend by the explanations offered. The model of this pneumatic engine certainly has taken its full share of attention, and has provoked learned mathematical and poetical discussions, in which, on Saturday, some warmth was displayed both pro and con. Mr. Oliver Byrne was most active in defending Mr. Holmridge's principles against what he termed the old-fashioned doctrine—"that it costs as much to produce power as the power imparted." Mr. Holmridge was strenuous in his endeavours to convince his dubious audience—for several attacked his assertions—that his discoveries "had completely overturned that doctrine, the very extinguisher of genius, and the bar to all attempts to overthrow long-established error." He demonstrated by example the immense difference there was by his invention between all forms of steam power, and his family of 31 several beams, varying the moving power of the extremity of each beam, working upon the principle of a high-pressure engine; that is to say by injections of compressed air, by trigger movement, to raise one series of lifting air-wheels arranged along a cross bar, setting the four, six, or six beams, and at the same moment discharging similar air in similar quantities, to depress the lower valves of the opposite lower range of air-vessels. This action, he concluded, brought the beam movement to a stop as soon, without the smallest strain. Then, if four beams be twenty feet in length, and the communication of power is placed on each side of the axis, at four equal distances, driving down wheels, to move machinery, or work water-pumps for mines, he converts this power at the end of each beam into eight times the first power, because it works agreeably with the known laws of leverage. At the next conversation, when the complete model is exhibited, we will further enter on the assertion of the inventor, that he can work engines of any amount of horse power; for he, as doubt, will be again called upon to further explain the model the assertion he has confidently put forward, in an assembly of scientific individuals, connected with the best learned bodies in the world, that he can produce the enormous levitation moving power equal to 200,000 horses. It is but due to the inventor to say he had many attained his desire, and that, from his explanations, they were, with one or two exceptions, in accordance to his views, and thought it probable and possible to bring his engine to operate with success.

**IRON-WAY INVENTOR.**—At the Society of Arts, on Wednesday, Mr. Holmridge exhibited Elton's improved hand-table and weighing machine. The object in putting these tables of the ordinary construction on the scale bar of a railway, is, not, by the action of their construction, they are rapidly destroyed, by the frequent passage of heavy trains over them, notwithstanding the strength of the materials, and the unceasing motion and noise. Mr. Elton has constructed a new table, which, when set in motion, runs on the rail, and thus allows the train to pass rapidly over it without injury. The top plate of the table on which it runs being kept well clear, works with a loose collar round it in a vertical iron case, which case is supported and kept in its central position by two cross arms of cast-iron, of eight inches to each other, and attached to the rail. The loose end of the plate passes through the bottom of the case, below which is a stem, attached to a cross lever passing at one end through a slot in the sleeve, mounted, or bush-work, supporting the table, attached to the extremity end of the long lever, is a small iron, working in a vertical direction, and connected with a nail, or small lever, in which the table is put in motion by hand, as required.

**CASE IRONS.**—A consequence of the different uses of iron—Time past of the destruction of the Institution of Civil Engineers, February 27 (see *Mining Journal*, March 2), however, I think, an enormous improvement of what was done in connection with this subject. It was mentioned, as a fact, by a gentleman who had won the prize of the Society after an half hour to one thousand five minutes only, that the cast iron, of which the prizewinner of course was composed, was found converted into a sulphuric acid-making apparatus, and it was recognized by another gentleman, that this might be owing to the singular structure of the vessel producing a porous surface upon the cast iron. But this did not appear to be the opinion of the meeting, and I have learned, that the sulphuric acid-supper-humidifier, which this may be, from what I have heard, is often converted into a sulphuric acid-making apparatus. Thus, then, those who may come forward to furnish the very moderate funds necessary for placing the hydraulic railway in their mutual position among the inventions of the age, its right to which no one can possibly controvert, will probably find it shortly extending its ramifications in directions they never expected, and will soon be opening out sources of income on which they never calculated. In the railway system alone, I have shown, before—and am ready, if called upon, to do so again—that in constructing lines, later, favourable for its development, it will save about 2000, per mile, and in working them, two-thirds (or, say one-half), to be paid of the annual expense of the steam-horsepower system. Can any other invention fairly hold out such prospects?

**EXTRAORDINARY USE.**—Mr. Holmridge recommended the addition of wire to pens to the characterizing word in the manufacture, as a means of rendering the pens more useful for various less liable to break.

## ORIGINAL CORRESPONDENCE.

## ON THE PUMPING UP OF FIRE DAMP FROM COAL MINES.

SIR,—For your kind advocacy of the cause of the public, and the working man's preservation of life, I most gratefully thank you, and, agreeable to your encouragement, I will endeavour to make myself more clearly understood upon the important subject of the cylinders, or atmospheric exhausters, as I presume to call them. Upon the 5th of last April nearly 100 useful men lost their lives in an instant by fire damp. On that event, I wrote to Mr. James, the secretary of that excellent society in South Shields for ascertaining the cause and remedy for fire damp. I then mentioned, in general terms, that I considered that, if the atmosphere of the mine was very foul, an exhauster as large as a brewer's vat, or an ordinary gasometer, I did not consider would be too large, as the piston might be made of tarpaulin, or any air-tight canvas, hooped at the edges; but I will now, Sir, endeavour to give a more clear proportion for their construction:—Suppose the impure state of the mine to be such as to require the whole of the cubical contents of its atmosphere to be drawn off in twenty-four, thirty-six, or forty-eight hours. Let the cubical contents of the whole mine be taken—then, allowing the piston two strokes a minute, you have 120 to multiply by twenty-four, thirty-six, or forty-eight hours, as the viewer may consider most necessary; then produce the dimensions and numbers of your cylinders, until they exactly match the exhausting power which the viewer may require. I am still of opinion that three-quarter bore leaden pipe would be quite sufficient to supply the exhausters, but all must depend upon the proofs of actual practice in this entirely novel, though simple, proposition. If you, Sir, and the public press, can but excite public attention to the question, I and many have no apprehension of public disappointment.

J. H. GREEN FRAT.

*Upper Holloway, March 20.*

## IMPROVEMENTS IN THE MANUFACTURE OF IRON.

SIR,—I have been much amused lately, whilst reading in your valuable paper the different statements of your correspondents, upon the several modes and patents for making malleable iron—such a variety of conflicting opinions, upon a subject some of them have no practical knowledge of. In some of the statements which have appeared of late, about the making of malleable iron, there is much really valuable information and good sense, and in others a great deal of nonsense. I am not going to advocate the merits or the demerits of the different modes that have been recommended to make malleable iron from the ore, or other patented plans, but this much I may safely say, that some of the modes prescribed will never come into practical operation. For instance, there is Mr. Clay, from whom there is a long letter in your paper of the 9th inst. about his plan. The principle of Mr. Clay's method may be useful, but he will have to change his mode of application to the principle of his patent; for he may depend upon it, he may fight away with his present mode of application as long as he pleases, but he will not get respectable parties to take it up; but let him change his mode of application to the principle of his patent, and he will succeed. I should be very sorry to say anything to injure Mr. Clay's interest, because his principle is good, but his mode of applying it is defective. The experience of thirty-one years has taught me a few practical lessons on this subject. I consider it not my place to point out the course he should pursue, lest I should say anything to affect his patent, and I have no doubt upon my mind, but the making of malleable iron from the ore will come into operation at some future day similar to Mr. Clay's patent, but with a different mode of application. There is, again, Mr. Booker's patent mode of making malleable iron; this, I consider, is like a tradesman's bill that has run past its time—Mr. Booker has been ever-long taking his patent up. The improvements that are already made in some of the departments for making malleable iron, and particularly in the piling, &c., in one of the principal works in this country, far outstrip Mr. Booker's patent. When Mr. B. can make 20 cwt. of puddled bar from 2½ cwt. to 23½ cwt. of pig-iron, he will do what some of his neighbours in the trade are doing without the use of his patent, &c. Your correspondent, "A Welsh Ironmaster," in your paper of the 16th instant, is quite correct in his statements, with this exception, that his calculations on the quantity of pig-iron to make a ton of puddled bar is too much.

*Glasgow, March 19.*

## A PRACTICAL MANAGER.

**THE HINCKLEY BANK.**

SIR,—The writer of the letter on these affairs published in your Journal of the 16th inst., I presume is William Ivance, once of 23, Steward-street, Bishopsgate-street, who recently took the benefit of the Insolvent Act, and whose affidavit was inserted in your columns of the 17th ult.; if so, Mr. Needham is not likely to suffer from anything that person writes or says. However, as it is supposed that letter was sent to the press under the auspices of Mr. Peter Farnhead, I beg to state, that I have examined the accounts sent by that gentleman to Mr. Needham's solicitor, nearly two years after the transfer of the Hinckley Bank to the Leicestershire and Warwickshire Banking Company, and I have no hesitation in stating, that a considerable balance is due to Mr. Needham from the Hinckley Bank, and also the Leicestershire and Warwickshire Banking Company; and if Mr. Heading to the representative of those two banks, he is indebted to Mr. Needham more than 15,000*£*. As for the trading firm of J. S. Needham & Co., having no cash book, it is utterly false; the daily cash book of J. S. Needham & Co. was regularly kept by William Argill, and is now deposited in the Writ and Record Office, Chancery-lane. Mr. Needham, in his answer to a bill in Chancery (Herring v. Needham and Frith) avers that the losses (if any) of the Hinckley Bank were under £100*£*; Mr. Farnhead states them to be more than 40,000*£*. Why does Mr. Farnhead publish a list of the bad debts of the Hinckley Bank?—The mystery would then be explained.

N. J. WHALEY.  
14, Cockburn-street, St. John's-wort, March 22.

## HYDRAULIC POWER APPLICABLE TO CANAL TRANSIT.

SIR,—I was lately asked by a canal proprietor, whether my system of hydraulic propulsion was capable of being adopted to canal transit?—the inquirer at the same time observing, that this description of property was now much in want of some method for obtaining a moderate increase in speed, with an increased power of transit. I confess I was rather surprised at the question—though not at the accompanying observation—as I had appended to the pamphlet entitled *The Hydraulic Railway*, and to which I have made frequent reference in your columns, a closing note, to show that, "while hydraulic propulsion can afford both power and velocity to railways of a proportionate expense, it can also offer to ordinary transways, or to stone or iron transways to be laid on high roads, or to broad roll ways where a moderate speed would be sufficient, as well as to canals and rivers where haulage is employed, very great economies of transit, at speeds varying from 6*m.* to 10*m.* or twelve miles an hour, at a very moderate fixed outlay."—As other parties might wish for the same information, which was sought by the gentleman just alluded to, you will oblige me much if you will make the columns of the *Mining Journal* the media for its being generally known.

I might as well now add, there appears to be no doubt that, with the aid of this great power, the system of locks might be dispensed with, and one of incalculable, with much effort and great expense of time. "A steamer" on wheels, in every respect proportioned, and well adapted to the work it had to do, would, of course, be required to receive the water in the water, and then draw them up or let them down the short courses, which would have to be held up each instant. It will now be perceived by those parties who, on public grounds, interest themselves in the success of this invention, that, while it will afford advantages for the railways (these leading advantages to which the interested manufacturers they offend) the public will be, it will also offer something like proportionate advantages to the heavier needs of canal transit, which, nearly two years ago, was nearly as popular a媒 of transport capital as the railway system is now. Yet some are rooted in custom, &c., &c., and, utterly to create, road, roads, roads, would be incalculable incalculable trouble.

Thus, then, those who may come forward to furnish the very moderate funds necessary for placing the hydraulic railway in their mutual position among the inventions of the age, its right to which no one can possibly controvert, will probably find it shortly extending its ramifications in directions they never expected, and will soon be opening out sources of income on which they never calculated. In the railway system alone, I have shown, before—and am ready, if called upon, to do so again—that in constructing lines, later, favourable for its development, it will save about 2000*£*, per mile, and in working them, two-thirds (or, say one-half), to be paid of the annual expense of the steam-horsepower system. Can any other invention fairly hold out such prospects?

*Bath, March 20.*

J. G. THOMAS.

## MINING IN CORNWALL—WHEAL SEATON.

SIR,—Allow me to make a few remarks on the letter signed "Observer," which appeared in your last Number, and which is evidently written by some disappointed and malevolent persons—one, probably, who held some shares, and got out of them too soon, and is now endeavouring to write down the mine, in order to pick up a share or so from some timid holder. It may be such a one as I have described; or it may be some "adventurer" who has nothing to lose, and is jealous of the prosperity now about to reward the indefatigable perseverance of those gentlemen who have managed this mine, and the adventurers, who, with a just confidence in them, paid during the ten years it has been prosecuted no less than 250*£*, upon each share. The writer of the letter asks—Who is the vendor?—Who the vendor? To say the least, I have no doubt (that is, if I am right in my conjecture as to who "Observer" is) they will bear any comparison with him, and little, I think, to the credit of the latter. I can take upon myself to say, that the vendor does not at this very moment know the purchaser of the share which he sold for 70*£*; and, for the enlightenment of "Observer," I may say, the same party has refused 75*£*, this week for another 1*m.* share. I mention these circumstances, to satisfy all whom it may concern (for I doubt whether "Observer" has the means to hold a share)—that, so far from the vendor and vendor having acted in concert, to raise this mine to a fictitious value, they do not even know each other.

One word to the shareholders—Do not hasten your shares to the market from anything which may come from an individual who evidently has no interest in the mine. Mr. Editor, do as you have ever done—Chastise those who conduct mines fraudulently, but protect the honest miners, and give the gentlemen who control Wheal Seaton the credit which is so justly their due in respect of their management of the undertaking in question, which will, in my opinion, rival, if not surpass, the best in Cornwall.

*VANARIA.*

[We are sorry that our correspondent should have descended to personal invective, and must decline in future the insertion of letters with harsh expressions. We admit that "Observer" was strong in his remarks, and although we incite his letter, knowing the writer, yet we by no means concurred in the opinions expressed by him, nor as regards the accuracy of the statements submitted. We are aware of the transaction referred to by "Varavia," and believe the matter to be all fair and above board. At all times we are ready to expose chicanery and humbug, but must say, we think "Observer" has gone a little too far.]

## PUMPING UP FIRE DAMP.

SIR,—The mechanical plan of getting rid of the "fire damp" by the action of the air pump, I am afraid would only be a partially successful one, from the low specific gravity of the gas. If a mercurial vacuum could be made to bear on the subject the case were different. The pumping up of carbolic acid from the depth of the mine, I submitted to the public thirty years ago, and have often experimentally proved its success. The plan recommended in my "Communications on Coal Mines," will be found in practice far more decided, and guarantees a far more certain and complete vacuum. If we could provide an inclined plane for the light carburetted hydrogen, as your ingenious correspondent knows, it would at once, by a statistical law, rise into day.—*March 18.*

J. MURRAY.

## IMPROVEMENTS ON THE STRAM-ENGINE.

SIR,—Intending to put up a small steam-engine, about 10 or 15-horse power, with boiler and apparatus, for heat working refineries, perhaps yourself, or some of your correspondents, would be kind enough to give their opinion as to the best engine, and the cost. So many improvements have been made in steam-engines and boilers within these few years, and methods of generating steam with less fuel, that it is difficult to select the best—and, therefore, trust I may be favoured with the opinions of some of your talented correspondents, which will oblige,

Sir, your's, &c., BOAS.

*Chapman, March 20.*

## MINING IN MEXICO.

SIR,—In your interesting Journal of last Saturday, I find, in the article, "Mining in Mexico," the following:—"Almost all the operations are carried on in water, and the metalliferous lodes are not so abundant."—*Vera Madre*, we might doubt if it be a rock or a hole?—*he*. Sometimes we are led to suppose the terms *mine* and *lode* are synonymous—at other times, as of a different meaning. Will some of your correspondents favour me, through the medium of the Journal, with a definition of the above terms?—It will much oblige not only me, but a great number interested in mining.

W. F.

## SCIENCE OF MINING—BACKS OF LODGES.

SIR,—I should esteem it a favor, if any of your valued correspondents would be kind enough to inform me, through the medium of your Journal, whether there is any rule or criterion—judging from the appearance of the backs of lodges, and the strata in which they are found—to insure any tolerable degree of certainty, if explored, that they would prove profitably productive to mineral produce. "Is a cross-section, descriptively to be wished?" that we should have some rule or guide, whereby we may avoid, in mining, this region of bewildering uncertainty and disappointment. For want of this information, many of us have suffered severely; but I hope the time is not distant when the science of mining will become a legitimate standard of knowledge, to guide us with certainty in our researches—desire surely it is that we should have something more satisfactory than the old adage, "Where it is, there it is," or "No man can see through a millstone."

I think something advantageous might be the result of testing the gosses, or oozes, from the backs of lodges already discovered, by the elements of chemistry, which would become a criterion for the chemist in analysing gosses from unexplored lodges—unless it would be evident, that oozes from mineral oozes must be different from any other earthy substance.

*An Inquire.*

*Budapest, March 19.*

## RAISING STUFF FROM MINES.

SIR,—As it is of great importance to the mining interest that this subject should be followed up, with a view to more positive improved result, I will thank one of your able correspondents to inform me how the duty of a stram-engine is at present calculated. The average weight of timber may be the criterion, taking into account the spiral form of the wiles or coil of the rope, whose weight is not altogether thus compensated, as "we" loss in motion what we gain in power?—If the presence of stones in the timber or planks be reduced as the rope descends (and ascends on the other side), there may be some compensation here. The duty may be computed as high as 20,000*£*, per *m.*, but the quantity of stuff raised bears no comparison. There is a vast difference between a *thick* *m.*, and a *thin* *m.* "country," or "admin." If the lighter the stuff the greater the velocity, in proportion, without waste of steam, then there is no loss in raising timber of unequal weights with the same engine. The writer may be told by some that certainties than scientific arguments, that your engine works on a principle on which he is entirely ignorant. It will be remembered, however, that he is mostly a beginner for knowledge which might be more generally known in a world where granite is wood, and "knowledge is power." The size of the engine, and the height it can ascend, are the determining factors for its use in its upward hydraulic engines, which are the "lives" of the works—country, or waste—there is no doubt that the continued application of the genius of successive power to the raising of solid matter to heights, or from great depths, may accomplish more than has yet been done in the same time. Perhaps, if several timber were attached to the bottoms of each other, like the trees of a forest, more stuff might be raised than at present, where the power of the engine is equal to the work, though to that case the policy should be a little higher above the stuff, to allow of the lower timber being first drawn out of the perpendicular line, and apart, with the timber, just as at present. Perhaps, these being attached would allow of two or more being placed "in a row" in the same, and thus more easily filled.—*Preston, March 19.*

A. T. J. MAXWELL.

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By the fact, that any raised pressure of steam would cause the water to boil out of the top of the pipe; indeed, such appears frequently to have occurred previously to last Saturday morning. On that morning there was no boiling over, nor any considerable escape of steam from the safety valve, previous to the fatal explosion. My object in taking the liberty of writing to you, is to give you a question, with a view, if possible, to elucidate the mystery. Would it not be possible to throw any light on the subject, you would thereby be conferring a lasting benefit on the public, particularly on that portion who are connected with steam-boilers, or employed near them. It appears to me that the English man was in the practice of lifting the safety valve from time to time during the night, I suppose that, as to let out any steam that might get into the boiler, and these would be little or no steam, when the atmospheric air would get into the boiler, and fill up the space usually occupied by steam. The engineer says, that on Saturday morning, when he got to his work, he found the fire very low—that he spread it out on the hear, and threw on a few coals. The coal air that might have been in the boiler, combined with the steam, form a gas of some kind—If so, would that gas expand when heated by the boiling water? From the safety valve, and also from the fact of no little steam having escaped out of the feed pipe immediately previous to the explosion, which I think would have been the case if the explosion had been caused by the pressure of steam alone. Trusting you will do me the favour to give me your opinion on this particular point.

[We regret to learn, by a private note, that our excellent correspondent is seriously indisposed, and consequently unable to return to health, which we hope may be speedy. Dr Murray proposes to resume the subject, and to state how the electricity can be generated.]

#### NEW ZEALAND PLATE

Mr.—In your last Number you furnished us an account of the proceedings of the New Zealand Society, and touched upon the views entertained by its members regarding that very extraordinary production, New Zealand flax; and, as the future gigantic importance of it to Great Britain is at length apparent, may prove acceptable. New Zealand flax (*Phormium tenax*) is a perennial in its growth; the fiber is in the leaf, which is somewhat like the sisal, the length of which varies, according to its exposure to the winds, degrees of exposure of the soil, from two to twelve or fourteen feet—the breadth of three to four inches; it is provided with a stem in the center, which supports "cane," this cane is so abundant, that it can be derived from the base of the plant during the commencement of the warm and growing weather—of after drying the head, this cane becomes incorporated with the fiber, after cutting and breaking, and brittle—and rope made of it is in this state, break easily, and will not resist friction: when exposed to damp, especially under water, the presence of this cane causes the rope to swell, and become slippery—therefore it will turn nearly black, and rapidly become rotten.

This will at once explain why the Government contented of one time (which failed)—and why many patented mechanical contrivances for detaching it, and expediting the work of many thousand pounds, proved also laborious and money lost. It was, therefore, pretty evident that the application of other mechanical principles, or manual labor, was required; a chemist was naturally selected to, and has effectively succeeded, with the aid of medicine, in producing a fiber as pure, fine, even, and nearly as strong, as silk. The quality of this plant is of vast tenacity, and does not require the application of heat, or fire, to burn it, nor water to wash it, nor any other agent to remove it, nor, that it is not only applicable to all the purposes to which flax and hemp are applied, but is infinitely superior in point of durability, and the materials there grows wild (which, we doubt, could not improved in quality and increased in quantity by cultivation), to such an extent, that it is estimated sufficient might be had to supply all our hemp and flax manufacturers in England, I believe, says upwards of 3,000,000 acres, chiefly, in a few counties, Old Broad-street, City, March 14.

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Railway Reform.—In my last letter to you on the subject of Railway Reform, I endeavoured to show the false position in which railway proprietors were placed as regards to the public—that the interests of the two parties were diametrically opposite—and that the proprietors could not sacrifice their just rights without inflicting great injury on the public. Railway proprietors have already possessed a monopoly greater than ever was exhibited before any mercantile body—they have the right to negotiate with the townspeople—they can, by discriminatory rates, stop up the great arteries of communication throughout the country, and refuse to open them, till the demands are complied with—competition with those on incisive roads is impossible, as there are many goods and passengers at the one. Against such a state of things the public have the strongest support on the side of justice, and consequently, as they are under no obligation to take care of the public, in the pamphlet we distinctly affirm, and in their practice to present, it has reduced the working of the system to a mere mockery; but there is one heavy grievance connected with the management of incisive proprie<sup>t</sup>ies, namely, the charter—which requires payment of a sum equivalent to—I shall only trouble you with one instance—the creation of a committee of the House of

is in this country conjugated. I state very  
briefly, in his examination before a committee of the House of  
Commons, a few years since, in answer to a question as to the weight of goods  
destroyed by a luggage train, replied, - I looked recollecting at the returns of  
one of our luggage trains, and I see, that on the 1st March, one of our cars of  
engaged engine only, not a goods engine, brought up from Wootton Bassett  
to Paddington, my engine, a gross load of 200 tons, exclusive of engine and  
tender; the engine kept me there very well; we brought up the train of goods  
without being delayed, or any inconvenience on the line. I obtained from  
one of the most judicious masters in London the different items of expenditure  
there which would be necessary in carrying such a weight of merchandise  
from Wootton to London, by carriage road; the master would be  
able, which by the railway they would be enabled to do, less than the  
one eighth part of what it would be by carriage road. Now for the charge  
of carriage. Presently it was, on an average, about 10/- per ton, from Wootton  
to London—that included delivery; now it is less, per ton, without deliv-  
ery. The cost of carriage is reduced from 10/- 1/2d. per ton, without deliv-  
ery, to 7/- 1/2d.—a rate of proportion and quantity  
in accordance with Chester. It may be required, then, were we ever so  
desirous to get goods from the establishment of railroads; that, how-  
ever, is not the question, were we not called on to discuss it—what is  
to be done in the view of the public being deprived of the services advancing  
the welfare of man?—that is to say, the cost of carriage is reduced in the one eighth part of what it is  
now, and the cost of carriage off the advantages which

by which the men of the world are of assistance, and the best works of assistance, would derive from methods which are different systems.

It is a great error to suppose, that the relationship of culture has to culture or civilization, has not yet been effected, without producing a change of sufficient value; nor is the relationship of culture or civilization as complete as it can be, without the same. The general principle of culture or civilization is, however, to have the value, and the means of obtaining culture or civilization, to be adjusted to each other. These are two which should not have been avoided, even they were to be avoided; but it is necessary we do, seeing that the one is the cause of the other, and the other the cause of the one, and all the benefits from culture or civilization, which, by better management, may be obtained. This I mean, is a fact positive, that which is true, and has not been contradicted, that to be obtained, there must be a certain number, upon which the present system,

the division. This way, the whole world can see, there would be no  
loss, it is not something beyond a reasonable price. It would be difficult to make  
a decision where the country pays for research to the highest level,  
but the money spent on the creating technology, is supposed to be used  
and on the power system, is supposed to generate. In which, how-  
ever, many people say, that the electrons of the nuclear source  
would be a great threat to human health, than that the energy produced  
will be cleaner like the conversion of wind turbines. Also, in technically, the  
radiation is still a danger to the public even reduced to the same proportion  
as the cost of research? Such, whatever parts the country has decided to  
generate from the change in the mode of consumption, will be required  
of different methods, intended to clean the air, change will be required  
depending greatly, how who has and what kind of a shape. Some countries  
are so much concerned about the environment, decided that no amount of oil  
and gas are to permit, so high, and to some extent, they begin to use  
other energy ways. The hydro and thermoelectric energy growth  
in the world, and though it is of the cost to use much, it is called  
to use more hydro and thermoelectric energy. In a form of oil, which  
is not renewable, and though the price is high, the cost of  
hydroelectric and thermoelectric energy is low, though the price is  
high, but the cost of hydroelectric and thermoelectric energy is low.

less time what they were bound to do, which is nearly balanced. But let it not be forgotten, that the same principle applies to canals as to railways, and that the carriage of passengers on canals is equally applicable to the conveyance of merchandise. Fifty passengers on a railway can be conveyed at the same expense of carriage road, as ten passengers on a canal. The cost of transport for a passenger from here to one or two miles off, would be reduced to three half-pence, and to Liverpool to sixpence. How does it happen, then, that the public is deprived of the corresponding advantages which such a cheap mode of conveyance affords?—Why is it that the London to Birmingham, or the poor man's steamer fare to Brighton? In a word, to what course can be traced those innumerable evils in the working of the railway system which have produced such an outcry throughout the country? The answer is, unrestricted monopoly—and that worst of all which is carried on under the mask of free trade.

## ~~IGHT THROWN ON GEOLOGY BY SUBMARINE RESEARCHES~~

At the Royal Institution, after having alluded to the researches of the two Italian naturalists, Donati and Soliani, who dredged the Adriatic about the middle of the last century, Professor Forbes entered on the important subject in the Antitropics. His first conclusion was, that marine animals and plants are grouped, according to their species, at particular depths in the sea, each species having a range of depth appropriated to itself. Prof. Forbes illustrated this assertion by a diagram, indicating the plants and animals respectively inhabiting what he termed the littoral zone, which extends immediately from the coast—the littorina zone, where the benthon—leaved fish are especially bivalves and corals, and the deep sea coral, an assemblage of molluscs only we find examples of large ones on the British shores. Prof. Forbes next alluded to the fact of the number of species diminishing according to depth, so that by gaining an accurate knowledge of the fauna and flora, appropriated to various sea bottoms, the naturalist can infer their depth—say 10 fathoms. Sedimentary deposits below this depth are consequently destitute of organic matter. This circumstance bids the geologist to be cautious in inferring that any stratum was formed before the creation of animal life, or no other account than that it is devoid of organic remains; he should rather conclude from such deficiency, that the stratum remains; he should rather infer that the fauna in the Mediterranean Sea; but that in that sea, the proportion of northern testacea in the lower zones greatly exceeds that in the upper, so that there is a representation of climates, or parallels of latitude, in depth. The fourth proposition advanced by the professor, was, that all varieties of sea bottom are not equally capable of maintaining animal life. The sandy parts are usually the desert ones. Hence the scarcity of fossils in sandstones; though traces of worms (which inhabit the sand) are found in ancient sandstones. As each animal is not able to live, except on its own inclosure, these marine animals, as the scallop, which are gregarious, destroying the ground when they increase beyond a certain extent, die; then this fact explains the phenomena of distribution of distribution of organic remains in strata alternating with those which are free from organic remains. Professor Forbes proceeded to observe, that such animals as are common in many zones of depth, are those which have the greatest horizontal range in space, and are generally those which are present in the tertiary deposits; and thus it is that the most generally-distributed fossils are such as are found in the greatest number of formations; because they are necessarily the most independent of destroying influences. But, on the other hand, as the elevation or depression of strata to a very small extent would destroy the species peculiar to any zone, or to the zone above or beneath it, it becomes an important inquiry how this destruction is compensated. In dealing with this question Prof. Forbes announced a most important law in zoology, one altogether new to ourselves—viz., that the molluscs migrate. He discovered by his own observation, that this is the case even with the *Hippopus*, the most fixed of all species. This migration occurs in their egg-state, when the ova are strong together, and floated over the ocean, from shore to shore. In the larva state they remain in the same place, but in the adult state they are strong enough to travel in any zone, they cannot arrive at perfection except in the peculiar zone to which they are adapted. This accounts for the imperfect shells of prematurely dying mollusca being found at a low depth. Professor Forbes concluded his communication by noticing the bearings on the views of the most eminent geologists of our time. 1. With regard to Mr. Lyell's principle of distinguishing tertiary strata by the per centage of recent species in each. This is confirmed by Prof. Forbes's investigation of recent in living mollusca, the element of depth, which gives climatal changes noticed that Sir H. De la Beche had hypothetically anticipated. 2. Professor Forbes's researches established the representations of climates and depth, ten years ago. 3. He lastly asserted in *Vincent d'Archiac* and M. de Verneuil, the credit of having announced (what he had observed and mentioned in the course of his communication) that species which are found in a great number of localities, and in very distant countries, are always those which have lived during the formation of several successive systems.

**INSTITUTION OF CIVIL ENGINEERS**

A description was then read—“Of the Formation of the  
Sea-shore, on the Firth of Forth,” by Mr. James Hay.—This was a curious  
instance of an extensive tract of nearly one acre of land being formed by an  
annual deposit in about two years. The river Esk, when swollen by rain, is  
stated to bring down quantities of the detritus from the hills, which, with the  
sand washed from the banks of the firth, is arrested when it meets the  
stones, becomes fixed; the sand is blown over it by the heavy north winds,  
to which the shore is exposed, and thus this large tract has been formed. The  
nearly the entire town is built upon land thus recovered from the sea, without  
the aid of art.

The next paper read was "A Description of a Machine for Transporting the Railway Carriages from the Arrival Side of the Terminus to the Departure Side, or to any one of several Intermediate Holes, was then described.—An opening being made in the train, the apparatus is pushed on to the line of rails, and the carriage required to be moved is run over it when the frame is quite down, it being then sufficiently low to allow the carriage to pass freely over. As soon as the carriage is brought directly over the apparatus a man works a pump, sending up air from hydraulic press, which raises the frame until both sides are in contact with the sides of the carriage-wheel, with the carriage suspended upon it, is then easily transported to any of the holes of rails, when, by unscrewing the stopper, which allows the water to flow back from the press into the cistern, the carriage is lowered on to the rail, and the apparatus is rolled over ready for recommencing the operation. The whole transit not having occupied more than one minute and a half, the machine is stated to be very satisfactory, and its cost to have about £300.

An account was then read of the damage at Western Holloway, by Mr. J. G. Thomson, Great. Inst. C.E.—The road which was described, is situated about five miles on the London side of the neighbouring high lands, lying upon the blue loam soil and sand. The whole channel was entirely full of water, and appeared to have taken all attempts to drain and clear, by cutting away a portion of the bank, which was dissected along, the support was taken away, the whole mass was set in motion, every attempt to arrest it was徒劳无功。The details of the attempt at clearing water ledges, striking pits, which collapsed, and were obliged to pile up with stones and boulders, and all the other engineering devices which were adopted, were given with great interest, and which being told in such well-contrived drawings, gave an interesting account of a good deal more of one of the difficulties to be encountered by the railway engineer in ordinary course of his labours. The paper was an example of that which has so frequently obtained notice at the meetings of the Institution—showing the skill and ingenuity which must enter under such circumstances.

The following papers were introduced to be read at the meeting:—  
"On London Cuttings and Embankments, with an Account of the Workings of the London Clay," by C. H. Gregory, *Genl. Inst. C.E.*; "On the Passage of Water through the Soil," by J. A. Christian F. W. Conrad, *M. Inst. C.E.*; translated

**McGraw's New Method of Closing the Prosthetic Trunk or  
New Anterior-Posterior Suturing.**—Dr. McGraw communicated to the Amer-  
ican Society, as an improvement on that of present used to close trunks, Clamps and  
Sutures, which is, by a long hand of suture, need to be drawn. Clamps and  
the other who need to be end attached to the front margin of the opening  
and is immediately passed it in place again and made to adhere to the rear  
end without a knot, which gives opportunity to suture to be one  
and that the anterior and posterior sutures will be in opposition, which is a great  
improvement to place, on the upper portion of the opening, two longitudinal  
sutures, consisting a pair of clamps attached, followed with suture, to handle  
each other, perform the same function as the tie in the former would,  
close them securely, a single-clamp end passes through the tissue, open-  
ing, from this the elasticity, and fall very little tension, is created during

## MINING IN THE EASTERN DISTRICT OF CORNWALL.

[From a Correspondent.]

**SOUTH CARADON.**—The improvement here since my last communication has been very considerable. The eastern end present no very flattering appearances, although the tributaries continue to return large quantities of ore, but the new lode discovered in extending the cross-cut north has not proved very productive, and is not the same (as anticipated) which has been found so rich in the adjoining mine.

**WEST CARADON.**—This lode has been explored upon to the extent of about sixty fathoms from where it was intersected at the seventeen fathom level; this course of ore is certainly one of the richest in the county, and will, no doubt, place her second to none; the quality of the ore is superior, and can be broken for about £1. 6d. in the £. The main lode continues very productive, and the cross-cut progressing from the sixty fathom level to take the north lode at that depth, when she will, in all probability, intersect the lead with the most opulent of Cornish mines.

**CARADON CONSOLS** remain much the same as spoken of many months since, and as many years will elapse before she will boast of an engine-house or dressing floor, preparations for which have not yet been commenced.

**EAST CARADON.**—They are perseveringly driving the deep adit north to cut the South Caradon main lode, from whence they calculate of being object, an important question may be asked—that is: From the underlay of the lode, at what depth does it go out of the sett?

**TOKENBURY.**—The many promising lodes that have been opened upon fully warrant the highest character of this sett, and little doubt remains as to her ultimately taking a prominent position in the ticketing list.

**MARKE VALLEY.**—The new engine-shaft, it is presumed, will be down to the seventy fathom level in about three weeks, when facilities will be afforded for the more efficient exploring these promising lodes; at present they sample about seventy tons of copper ore every two months.

**WHEAL PHOENIX** is progressing gradually, and this extraordinary large lode will, it is confidently anticipated, amply repay her persevering adventures. About two-thirds of the expenditure is met by the returns, which are sold by private contract.

**WHEATCOTT.**—This is a most promising sett; excellent stones of ore are found in her present shallow levels. The erection of a superior water-wheel is nearly completed, and, from the advantage of a never-failing stream of water, this mine can be worked with great facility.

**LISKAIRN CONSOLS.**—The engine-shaft is progressing to the sixty fathom level, and to which depth they are within three fathoms, when a cross-cut will be extended to intersect the lode, and it is confidently hoped that a course of ore will repay the exertions of those who have so judiciously undertaken these miner-like operations. The lode was seen at the forty-five fathom level; it was deemed advisable to sink deeper, when it was prudently considered better to sink to a proper depth, without necessarily expending capital at intermediate levels; the north and south lodes form a junction a few fathoms below the present intended bottom.

**WHEAL ROSE.**—This has considerably improved since my last visit; a very good lode has been discovered, and there is no doubt of her bearing out the confidence placed in her.

**CARLINGTON MINES** (late Redruth).—The silver-lead lode in the different levels is generally productive. There has been an extraordinary drawing-engine lately erected at the south mine, or shaft, and, from its whimsical construction, obtained the appropriate name of *Groot's puffer*, possessing the singular appearance of an locomotive stuck in the mud. It is really unaccountable that the caprice of an individual should have an influence so injurious to a company—such an unnecessary expenditure, such a waste of capital as this machine must necessarily involve in the consumption of the item coal. The power, or steam, is supplied from the boiler of the pumping-engine, and consumes upwards of a ton of coal every twenty-four hours. I have not the least hesitation in asserting, that the engineer (whoever he may be) would readily contract to erect a new Cornish drawing engine of superior duty from the savings that would be effected in twelve months. No search for *Groot's puffer*—It will prove at least advantageous to the neighbouring meadows, as the condensation of the immense columns of steam issuing therefrom, will answer the purposes of irrigation.

Carlton in the last few months has considerably fallen off in her returns, which is, in some measure, accounted for in the official reports.

**EAST HOLMEBOURNE.**—A grant of a most valuable and extensive piece of ground has been recently obtained from the Duchy by a party, who, I learn, is making the preliminary arrangements for carrying on immediate operations. Its extent and the number of lodes passing through it, together with the facilities for working, most fully impress a casual observer with the future prospects of success of this undertaking; embracing, as it does, the whole of the Holmeboorne lodes as well as the great north lode, which has only been seen in the tail of the adit of that mine; the Gwennap Lake lode, that proved so productive in the last extensive working of that mine, as well as the Marquis lodes, now worked upon so many indications of prosperity by the Bedford Mining Company. It is proposed to continue the deep adit south, already commenced, which will take the lodes at a great depth, and prove the same at a very inconsiderable outlay.

**GREAT WHEAL CHARLOTTE CONSOLIDATED MINES**, which are contiguous to the above, assume a most encouraging appearance, and little doubt remains of their fully verifying the confidence of the proprietors.

I cannot, Mr. Editor, close these observations, without referring to a period of about ten years since, when operations in this district were resumed under the direction of a gentleman now about to quit this country for the Peninsula. The obstacles of prejudice and ignorance which presented themselves, as regards this district, he, after contending with difficulties, surmounted—and, with enthusiastic confidence, laid open the numerous lodes in this locality; and, successfully a mine that is now in active operation, but was, directly or indirectly, under his supervision, or brought by him under the notice of the capitalist. That individual may now stand on Kit Hill, and, within the scope of his vision, distinguish the huge stacks of timber, and the泰器 Canada, West Canadian, Redwood, and the泰器 Canada, would, perhaps, never have opened their treasures to the world, or have sent their hundreds of thousands into the British market. It must, indeed, be gratifying to him to reflect, that he has, by his exertions, afforded employment to thousands of his fellow creatures. Surely, Sir, one would imagine that this instance alone would prove sufficient to stimulate the most timid, and to call into useful activity a portion of their unemployed capital—and to make influential advocates of those who have hitherto held such means of employment with positive indifference, when they consider how much has been achieved by one individual—indeed, I admit, by the capitalist. There too, Sir, this paragon is a legitimate and honourable citizen of the Eastern district of Cornwall, to be left in honourable but silent obscurity.

E. E. D.

Dartmouth, March 19.

**THE LORNE AND MORTON TINTAGEL PENINSULAR SURVEY.**—The exhibition of the first model in commemoration of this model and successful institution took place on Tuesday last, at the London Tavern, Bishopsgate-street.—The plan was taken at six o'clock by Mr. H. W. Rouse, one of the two presidents, who was supported by nearly a hundred of the most eminent and influential members of the Society. Everything was in the best style. The exhibition was a success, and the amount of subscriptions and donations more than usually large for a society to a state of mind, to the funds, and by his impulsive and business-like address to the company on presenting the model.—Success to the Institution, “reared many pillars, this century.” It was supported well, and it appears to support itself, and to stand on its own feet, notwithstanding the want of the support of the Society. The Tintagel meeting caused shock to the members of the Society, and will not accept contributions from them again. The Tintagel meeting caused shock to the members of the Society, and will not accept contributions from them again. This is, perhaps, as it should be, and it will impede us all, especially those trades to become collectors, and gives them cause of alarm, discontent, and trouble. The general trend and sympathies cannot be easily disturbed, and even the health of the members, with more than usual firmness, of good bearing, when the party assembled, highly delighted with their visitation.

**PORTS CLOTH TO A FRENCHMAN.**—A few days ago, when working in a quarry near Brixham, a Frenchman, named as such, was found dead in the quarry. This man was a worker in the estimation of the quarrymen, and is not known to be a Frenchman. The quarrymen are all Frenchmen, and the man was found dead in the quarry.

**THE FRENCHMAN'S CHAMBERS.**—The dispute between Brixham, Ryhope, and their subjects will continue unsettled. The health of the emigrant ore is undergoing great privations.

## MINING CORRESPONDENCE.

## ENGLISH MINES.

## HOLMEBOURNE MINING COMPANY.

March 18.—In the 110 fathom level, west of Hitchins' shaft, the lode is sixteen inches wide, and worth £25. per fathom; east of Hitchins' shaft the lode is small and poor; west of Goldsworthy's the lode is one foot wide, and worth £10. per fathom; in the rise, in the back of this level, the lode is sixteen inches wide, and worth £24. per fathom. In the 100 fathom level, west of Hitchins' shaft, there is no important alteration; east of Hitchins' shaft the lode is sixteen inches wide, and worth £26. per fathom; east of Wall's shaft the lode is small and poor; in the rise, in the back of this level, the lode is fourteen inches wide, and worth £20. per fathom; the ground in the cross-cut, towards the Pinchbeck lode, is much the same as when last reported; in the steps in the back of this level, west of James's western mine, the lode is one foot wide, and worth £14. per fathom; in the steps east of Dowsy's mine the lode is sixteen inches wide, and worth £26. per fathom; in the steps east of Hooper's rise the lode is twenty inches wide, and worth £14. per fathom; west of ditto the lode is sixteen inches wide, and worth £26. per fathom. In the steps in the back of the ninety fathom level the lode is one foot wide, and worth £26. per fathom. The cross-cut at the eighty fathom level is still without alteration. The pitches are turning out well.

T. RICHARDS.

## COOK'S KITCHEN MINE.

March 18.—In the fifty fathom level, east of the eastern shaft, on North Tiscroft lode, the appearances are more promising than when I wrote last week; the lode in the shaft, sinking under the fifty fathom level, is also more productive than it then was—it is now worth about £1. per fathom; the pitches in the back of this level, east and west of the shaft, are still looking very well. Enderby's lode, in the new east shaft, sinking under the seventy-two fathom level, is worth £10. per fathom, with every prospect of a further improvement; in our cross-cut north from this lode, at the seventy-two, the ground is much the same as it has been for some time. The ground is rather more favourable in the cross-cut north from Chapel's lode, at the forty-two, and we expect we are not far from a lode. In the cross-cut south, at the 111, Dowsy's lode, is now very near the cross-cut, but there is little difference in its appearance since last week; the wings sinking under the 100 fathom level is now about five fathoms, and we have no water as yet—the lode is still about three feet wide, worth £10. per fathom. In the 100 fathom level, east of east pump shaft, we have a promising lode, four feet wide. In the cross-cut south of the twenty-one fathom level the ground is favourable. The pitches are rather better, but there is little alteration in them; we shall, however, increase our sampling next time.

A. ELLIOTT.

## CONSOLIDATED TINTAGEL MINING COMPANY.

March 18.—The south part of the Slade-park lode, at the fifty fathom level, west of Hawwood's shaft, is ten inches wide, producing a little ore; the north part of the Slade-park lode, at the fifty fathom level, west of Hawgood's shaft, is nine inches wide, producing good stones of ore; the lode in the fifty fathom level, east of Hawgood's shaft, is small and poor. The lode in the forty-five fathom level, east of Hawgood's shaft, is one foot wide, very good, tribute ground. The lode in Williams's shaft, sinking under the forty fathom level, is eighteen inches wide, good tribute ground. We have sampled this day 107 tons of ore. By means of some hindrance with our engine in the past week we have been prevented from sampling so much ore as we intended to have done.

HENRY WILLIAMS. JOHN MORCOM.

## BEDFORD UNITED MINING COMPANY.

March 18.—The engine-shaft at Wheal Marquis is sunk about 3 fms., 3 ft. below the forty-seven fathom level. In the forty-seven fathom level east of the lode is about two feet wide, composed of gossan, spar, and good stones of ore; in this level west the lode is about eighteen inches wide, composed of gossan, spar, and ore—a very promising lode. In the thirty-five fathom level east west of the lode is about two and a half feet wide, and worth £10. per fathom; in this level east the lode is about two feet wide, composed of spar, sandstone, and stones of ore; in the sump west, sinking below this level, the lode is about three feet wide, composed of gossan, spar, and good stones of ore. The pitches are much the same. At Ding Dong, the lode is the engine-shaft is about eighteen inches wide, composed of spar, sandstone, and good stones of ore.

J. PHILLIPS.

## GREAT WHEAL MARTHA CONSOLIDATED MINES.

March 11.—Having recently returned from visiting the mines in Cornwall and Devon under my superintendence, I am happy to say, that the Great Wheal Martha is one of the most promising. On going on the mine, I found all the directions I had given on my last journey carried out—the large and powerful wheel working with great regularity and force, sucking the water off the mine—the leat and launders, for conveying the water, in perfect repair, and the alterations made, rendering them more efficient than in the last working—the wheel for the crusher and when in good repair, the crusher and when in working order—the stamps repaired, and ready for working, which they will do this week, on some halveys. The dressing floors, and sheds for the dressers, and other arrangements, are completed. I have avoided all surface expense, beyond what was essential for conducting the operations; and the assistance, repairs, and alterations that have been made, are strong and efficient. At the old mine, the water is in full below the thirty fathom level, and in less than a fortnight operations will be resumed in breaking up ground; but, from the mine having been worked on tribute only for the last two or three years, I am inclined to think more ground will have to be opened up for a few months, before we can expect a regular sampling to be kept up; at the same time, some will be raised in this week, and there is now a pile of ore raised and being increased from the adit driving west, which is indicative of a productive lode in the whole ground under—our prospects there are very good. The surface land, west, being the property of the company, there are great facilities for sticking shafts, &c., for the full development of the lode in that direction. I accompanied Capt. Richards (of the Holmeboorne Mine), Capt. Huskies (of the Alter Mine), and Capt. Phillips (of the Callington Mine), to inspect the new discovery (Seignior's lode) in the eastern part of the sett. This is situated in the valley, in a most congenial state of ground (filled), and has been laid open for about fifteen fathoms, from every part of which copper ore may be broken; the lode has been sunk upon for twelve feet to one part, and has improved in quality of the ore and width as it goes down—some rocks of ore, good saving work, weighing nearly 1 cwt., have been broken, a sample of which accompanies this; but as the water comes to stop, by natural causes, any deeper, I have called in the services of Mr. W. West (the engineer of the other mines under my superintendence), who has made arrangements for working this part, with a wheel of thirty-six foot diameter, with the same stream of water using at the old mine—and a wheel and materials (the property of the company) will, after some alterations and repairs, be brought into use at this point. I am happy to add, that Mr. West (who has great opportunities of observation) says, he never saw a more promising mine. In conclusion, I have to congratulate you on our prospects of success—and I have no doubt, that by presenting our operations, with that due regard to economy and spirit of promotion, made under my management, shall not be wanting, we shall have a profitable and lasting undertaking.

March 19.—I have to inform you that the water is now down to the back of the forty fathom level. The lode in the said level is still about two and a half feet wide, eight inches of which is saving work, and we have commenced dressing some of the ore. At the lower mine (Seignior's lode) Thomas's shaft is now sunk 3 fms., 3 ft.—troughed and secured, and the new working with great spirits. In driving the new cuts towards the shaft all our auxiliary operations are progressing very favourably, and we expect that the cutting of the lode, and ground for the wheel pit, will be completed by the end of another week.

T. PHILLIPS.

## TRAMMELL'S ENGINE-SHAFT COMPANY.

March 18.—At the eighth, east of Churton, the lode is split into two branches, one of which is five or six inches wide, and worth £10. per fathom. At Great Fortune shaft, sinking below the sixth fathom level, the lode is three feet wide, producing good stones of ore. At the sixth west the lode is four inches wide, and worth £10. per fathom; this lode is the same as the one at the eighth, and is driven through the same ground. The lode in the eighth, east of Churton, is five inches wide, and worth £10. per fathom; this lode is the same as the one at the sixth, and is driven through the same ground. The lode in the eighth, west of Churton, is four inches wide, and worth £10. per fathom; this lode is the same as the one at the sixth, and is driven through the same ground. The lode in the eighth, east of Churton, is five inches wide, and worth £10. per fathom; this lode is the same as the one at the sixth, and is driven through the same ground. 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